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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,243	02/06/2004	John G. Carman	15740.005	8954
7590		06/28/2007		
Mr. Fuller FENNEMORE CRAIG Suite 2600 3003 N. Central Avenue Phoenix, AZ 85012			EXAMINER ROBINSON, KEITH O NEAL	
			ART UNIT 1638	PAPER NUMBER
			MAIL DATE 06/28/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/772,243

Applicant(s)

CARMAN, JOHN G.

Examiner

Keith O. Robinson, Ph.D.

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13-18 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13-18 and 29-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action mailed December 13, 2006. The amendment of claims 1, 13 and 29 and the cancellation of claims 11, 12, 19-28 and 37-39 have been received and entered in full.
2. Claims 1-10, 13-18 and 29-36 are under examination.

### ***Terminal Disclaimer***

3. The terminal disclaimer filed on April 10, 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Patent No. 6,750,376, June 15, 2004 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Response to Arguments***

4. Applicant's arguments, see page 8, 3<sup>rd</sup> and 4<sup>th</sup> paragraphs of 'Remarks' filed April 10, 2007, have overcome the 35 USC 112, first paragraph rejection with regards to written description of claims 1-10, 13-18 and 29-36 on pages 2-3 of the Office Action mailed December 13, 2006. The rejection has been withdrawn.
5. Applicant's arguments, see page 8, 5<sup>th</sup> paragraph to page 9, 3<sup>rd</sup> paragraph of 'Remarks' filed April 10, 2007, have overcome the 35 USC 112, first paragraph rejection with regards to enablement of claims 1-10, 13-18 and 29-36 on pages 3-6 of the Office Action mailed December 13, 2006. The rejection has been withdrawn.

***Claim Rejections - 35 USC § 103***

6. Claims 1-10, 13-18 and 29-36 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Bashaw (Apomixis in crop improvement. *In* Hybridization of crop plants. 1980. pages 45-63), in view of Savidan (Crop Sci. 22: 467-469, 1982), further in view of Dujardin et al (Euphytica 38: 229-235, 1988). The rejection is repeated for the reasons of record as set forth in the Office Action mailed December 13, 2006, as applied to claims 1-10, 13-18, 29-36 and 39. Applicant's arguments, filed April 10, 2007, have been fully considered but they are not persuasive.

Applicant argues that Bashaw alone or in combination with Savidan and Dujardin et al does not teach the claimed invention (see page 10, 1<sup>st</sup> and 2<sup>nd</sup> paragraphs of 'Remarks' filed April 10, 2007).

This is not persuasive. As stated on page 8, 1<sup>st</sup> paragraph of the Office Action mailed December 13, 2006, Bashaw does teach a method of producing angiospermous apomictic plants comprising selecting sexual plants from the Poaceae family, namely buffelgrass, hybridizing sexual plants with apomictic plants, recovering hybrid seed, and selecting a hybrid plant that is apomictic to the apomictic parent plant (see page 59, Figure 3). Also, the plants taught by Bashaw would inherently possess divergent reproductive schedules of ovule development because Bashaw teaches that the sexual plant is heterozygous for method of reproduction (see page 58, 1<sup>st</sup> full paragraph).

One of ordinary skill in the art would understand that other sexual plants could be used in the method taught by Bashaw. See MPEP 2141.01(a) where it states, "[i]n order to rely on a reference as a basis for rejection of an applicant's invention, the reference

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must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In *re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) ("A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem."); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993); and *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1069, 68 USPQ2d 1481, 1490 (Fed. Cir. 2003) (where the general scope of a reference is outside the pertinent field of endeavor, the reference may be considered analogous art if subject matter disclosed therein is relevant to the particular problem with which the inventor is involved).

In the instant case, the reference is in the field of applicant's endeavor and is reasonably pertinent to the particular problem with which the inventor was concerned, namely a method of producing angiospermous apomictic plants comprising selecting sexual plants.

Applicant argues that Savidan fails to remedy the deficiencies of Bashaw (see page 10, last paragraph to page 11, lines 1-13 of 'Remarks' filed April 10, 2007).

This is not persuasive. As stated on page 8, 2<sup>nd</sup> paragraph of the Office Action mailed December 13, 2006, Bashaw is deficient in that it does not teach cytoembryological identification or chromosome doubling of apomictic plants. However,

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Savidan does remedy the deficiency of cytoembryological identification of apomictic hybrids between sexual and apomictic plants, namely *P. maximum* (see page 468, 1<sup>st</sup> column, last paragraph to 2<sup>nd</sup> column, paragraphs 1 and 2 and Table 2). Though Savidan does not teach cytoembryological identification of sexual plants having divergent reproductive schedules, one of ordinary skill in the art would understand that cytoembryological identification can be used to identify sexual plants having divergent reproductive schedules because Savidan teaches “embryological test [are] more rapid than progeny test because the former is applied to the plant itself” (see page 468, 2<sup>nd</sup> column, 4<sup>th</sup> paragraph).

One of ordinary skill in the art would understand that other plants could be used in the teachings of Savidan. See MPEP 2141.01(a) where it states, “[i]n order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also In re Deminski, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) (“A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.”); Wang Laboratories Inc. v. Toshiba Corp., 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993); and State Contracting & Eng'g Corp. v. Condotte America, Inc., 346 F.3d 1057, 1069, 68 USPQ2d 1481, 1490 (Fed. Cir. 2003)

(where the general scope of a reference is outside the pertinent field of endeavor, the reference may be considered analogous art if subject matter disclosed therein is relevant to the particular problem with which the inventor is involved).

In the instant case, though the reference does not teach *Antennaria*, *Tripsacum* and *Sorghum*, it is analogous art because the subject matter disclosed therein is relevant to the particular problem with which the inventor is involved, namely cytoembryological identification of apomictic hybrids between sexual and apomictic plants.

Applicant argues that Dujardin et al fail to remedy the deficiencies of both Bashaw and Savidan (see page 11, last paragraph of 'Remarks' filed April 10, 2007).

This is not persuasive. Neither Bashaw nor Savidan teach chromosome doubling of apomictic plants; however, as stated on page 8, last paragraph of the Office Action mailed December 13, 2006, Dujardin et al teach the chromosome doubling of apomictic plants (see page 234, Figure 3). In addition, Dujardin et al teach that a chromosome doubled plant "should [be] useful as a pollinator on tetraploid pearl millet to produce chromosome substitution lines for the purpose of developing apomictic pearl millet" (see page 234, 2<sup>nd</sup> column, lines 5-10). One of ordinary skill in the art would understand that the teachings of Dujardin et al could be used to produce other apomictic plants.

Thus, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of Applicant's invention to combine the above teachings to produce a method of producing an angiospermous apomictic plant that exhibits increased genetic stability for apomixis.

***Conclusion***

7. No claims are allowed.
8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith O. Robinson, Ph.D. whose telephone number is (571) 272-2918. The examiner can normally be reached on 7:30 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.



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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Keith O. Robinson, Ph.D.

June 19, 2007

**DAVID H. KRUSE, PH.D.  
PRIMARY EXAMINER**

A handwritten signature in black ink that reads "David H. Kruse". The signature is written in a cursive, flowing style with a large initial "D".